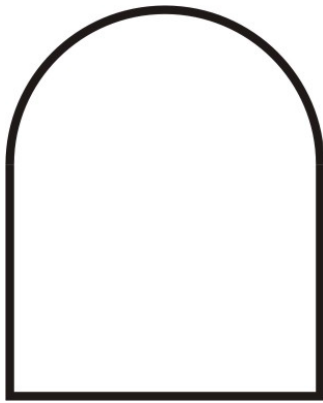


A Norman window has a shape represented in the figure below (three sides belongs to a rectangle and the fourth side is a half of a circle). If the total perimeter of the window is 10m, find the width of the window with the largest area.



A 8ft fence tall stands on level ground and runs parallel to a tall building. If the fence is 1ft from the building, find the length of the shortest ladder that will extend from the ground over the fence to the wall of the building.

